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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,595	12/03/2003	Jae-Jin Lyu	21C-0334	4849

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EXAMINER	
CHEN, WEN YING PATTY	
ART UNIT	**PAPER NUMBER**
2871	

NOTIFICATION DATE	DELIVERY MODE
01/08/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/725,595	LYU, JAE-JIN	
	Examiner	Art Unit	
	WEN-YING PATTY CHEN	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 September 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *5,6,8-32 and 36-40* is/are pending in the application.

4a) Of the above claim(s) *8-32* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *5,6 and 37-40* is/are rejected.

7)☒ Claim(s) *36* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Applicant's Amendment filed on Sept. 24, 2008 has been entered. Claims 5, 6, 8-32 and 36-40 remain pending in the current application, however, claims 8-32 are withdrawn from consideration.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 5 and 37-38 are rejected under 35 U.S.C. 102(b) as being anticipated by Jones et al. (US 5953091).

With respect to claim 5 (Amended): Jones discloses in Figure 2 a liquid crystal display apparatus comprising:

a first transparent substrate (element 65; Column 10, lines 51-52);

a second transparent substrate (element 43; Column 13, line 12) facing the first substrate;

a liquid crystal layer (element 5) interposed between the first and second transparent substrates;

a color filter layer (elements 35, 37, 39) disposed on the second transparent substrate,

a single retardation layer (element 77) having a cholesteric liquid crystal material (Column 12, lines 11-17; wherein the retardation layer is chiral doped) disposed having a substantially uniform thickness on substantially the entire color filter layer (as shown), the retardation layer being configured to be coated on the color filter layer and fixed by an ultraviolet light (Column 14, lines 44-47);

a transparent electrode (element 33; Column 14, lines 55-57) formed on the retardation layer; and

an alignment layer (element 31) formed on the transparent electrode.

As to claim 37: Jones further discloses in Column 12 lines 25-27 that the retardation layer comprises reactive mesogen mixture.

As to claim 38: The limitation of "wherein the retardation layer is coated via a micro gravure coating method" is recognized to be a product-by-process claim.

> "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

> The structure implied by the process steps should be considered when assessing the patentability of product-by-process claims over the prior art, especially where the product can only be defined by the process steps by which the product is made, or where the manufacturing process steps would be expected to impart distinctive structural characteristics to the final product. See, e.g., In re Garnero, 412 F.2d 276, 279, 162 USPQ 221, 223 (CCPA 1979). See MPEP§2113 [R-1]

The above-mentioned limitation presents no structural limitation to the claimed product.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 6 and 39-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et al. (US 5953091) in view of Kaganowicz (US 5011268).

With respect to claim 6 (Amended): The limitation of "the retardation layer being configured to be coated on the color filter layer via a micro gravure coating" is recognized to be a product-by-process claim.

"[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

> The structure implied by the process steps should be considered when assessing the patentability of product-by-process claims over the prior art, especially where the product can only be defined by the process steps by which the product is made, or where the manufacturing process steps would be expected to impart distinctive structural characteristics to the final product. See, e.g., In re Garnero, 412 F.2d 276, 279, 162 USPQ 221, 223 (CCPA 1979). See MPEP§2113 [R-1]

The above-mentioned limitation presents no structural limitation to the claimed product.

Jones discloses in Figure 2 a liquid crystal display apparatus comprising:

a first transparent substrate (element 65; Column 10, lines 51-52);

a second transparent substrate (element 43; Column 13, line 12) facing the first substrate;

a liquid crystal layer (element 5) interposed between the first and second transparent substrates;

a color filter layer (elements 35, 37, 39) disposed on the second transparent substrate,

a single retardation layer (element 77) disposed having a substantially uniform thickness on substantially the entire color filter layer (as shown), the retardation layer being configured on the color filter layer;

a transparent electrode (element 33; Column 14, lines 55-57) formed on the retardation layer; and

an alignment layer (element 31) formed on the transparent electrode.

Jones does not disclose that the alignment layer is made of an inorganic material.

However, Kaganowicz teaches in Column 3 lines 22-40 of forming alignment layers using inorganic materials.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct a liquid crystal display apparatus as taught by Jones wherein the

alignment layer is formed of an inorganic material as taught by Kaganowicz, since Kaganowicz teaches that by forming alignment layers of inorganic materials provides good molecular alignment, optimum resistivity and good tilt angle (Column 3, lines 14-21).

As to claim 39: Kaganowicz further discloses that the inorganic alignment layer comprises silicon oxide (see Claim 2).

As to claim 40: Jones further discloses in Column 12 lines 25-27 that the retardation layer comprises reactive mesogen mixture.

Allowable Subject Matter

Claim 36 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: None of the prior arts either alone or in combination fairly teach or suggest that the cholesteric liquid crystal material further has a function of a biaxial film. Therefore, claim 36 is deemed non-obvious and inventive over the prior arts and is allowable.

Response to Arguments

Applicant's arguments with respect to all claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WEN-YING PATTY CHEN whose telephone number is (571)272-8444. The examiner can normally be reached on 8:00-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Nelms can be reached on (571)272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

WEN-YING PATTY CHEN
Examiner
Art Unit 2871

/W. P. C./
Examiner, Art Unit 2871

/David Nelms/
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